The critical issue is: the logic in natural languages and sciences is much more complicated than the logic (or logics) in programming languages, or any other existing logics. Large language models are incomplete and inconsistent.

So, current logic studies, including relevance logic or any other substructural/paraconsistent logics, are inadequate.

There are countless types of mathematical logic and philosophical logic, but none of them could really judge the true/false in natural languages and sciences.

The following analyses could provide the foundation for a better scientific logic.

1) Most of numbers are not computable, or even not definable. How many natural laws are critical on these incomputable or indefinable numbers? This question cannot be answered by humans' sciences and verified by scientific experiments. It is NOT a trivial issue.

2) So, humans' sciences are NOT consistent and complete. Even if some pompous physicists still think the problems be trivial in physics, these problems would be amplified enormously in life sciences, and especially in intelligence sciences.

3) Thus, physical sciences, life sciences, intelligence sciences need very different reference systems. Humans should not stop at the reference system theory of general relativity.

4) These different reference systems need very different logic frameworks. There are paradigm shifts across these different reference systems related to logic frameworks. So, people should be specific about what exactly these paradigm shifts are in various situations.

根据上述分析，很容易理解Gerard't Hooft教授的逻辑错误。他在Free Will in the Theory of Everything一文中使用的God's computer表述，就是逻辑错误。自然规律中的逻辑（或者说上帝的逻辑）的一部分，是不可计算和不可定义的，当然不能用computer来描述。事实上人类根本没有the Theory of Everything，也不可能有。

而Gerard't Hooft教授的逻辑是人类逻辑，有天然缺陷。根据物理科学规律，也无法排除智力科学的自由意志可能性。这是不同范畴，需要研究不同范畴的参照系来研究不同范畴的第一性和范畴之间的逻辑变换。

无人汽车和大数据语言模型是否需要自由意志，或者说需要什么样的自由意志？这跟自由意志在人类智力中的作用机制有关。

认为人口控制类似火箭控制是错误的，需要研究相关的自由意志和科学逻辑问题。

逻辑的重要奠基者亚里斯多德提出了第一性问题。逻辑需要什么样的第一性？逻辑主义、直觉主义、形式主义三大数学流派争论的关键是什么，解决的关键又是什么?

人工智能技术缺乏科学上的第一性。要理解什么是第一性，需要研究科学革命、paradiam shifts、科学逻辑的结构、关键要素和机制。

普通人能学会的一些基本语言智力，人工智能也无法理解。现在人工智能没有测试这些人类基本潜力。认为人工智能已有人类学生某些阶段智力却忽视后者的发展潜力，更是错误。